

Applicant: Cheng-Liang Hou

Examiner: Jain, Raj K.

Serial No.: 10/694,732

Group Art Unit: 2651

Filed: October 29, 2003

Docket No.: 0063-115001/BU3130

Title: SYSTEM AND METHOD FOR VARIABLE DATA TRANSMISSION RATE RESOLUTION

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method, comprising:

storing a first plurality of data transmission rates in a register, wherein each of the first plurality of data transmission rates are spaced from each other by a first incremental value;

storing a second plurality of data transmission rates in a register, wherein the rates of the second plurality of data transmission rates are greater than the rates of the first plurality of data transmission rates and wherein each of the second plurality of data transmission rates are spaced from each other by a second incremental value that is greater than the first incremental value;

storing a third plurality of data transmission rates in a register, wherein the rates of the third plurality of data transmission rates are greater than the rates of the second plurality of data transmission rates and wherein each of the third plurality of data transmission rates are spaced from each other by a third incremental value greater than the second incremental value,

wherein the second incremental value is at least three times larger than the first incremental value, and wherein the third incremental value is at least ten times larger than the first incremental value;

receiving a request to transmit data over a port of a switch at a requested transmission rate;

selecting one of the first plurality of data transmission rates or one of the second data transmission rates or one of the third data transmission rates at which to transmit data over the port, wherein the selected transmission rate is based on the requested transmission rate; and

transmitting data through the port using the selected data transmission rate.

2. (Cancelled)

3. (Cancelled)

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4. (Cancelled)

5. (Cancelled)

6. (Currently Amended) The method of claim [[4]] 1, wherein the first incremental value is 64 Kbps, the second incremental value is 1 Mbps, and the third incremental value is 8 Mbps.

7. (Currently Amended) The method of claim [[4]] 1, wherein a first plurality of data transmission rates includes rates from 0 Kbps to 2 Mbps, a second plurality of data transmission rates includes rates from 2 Mbps to 100 Mbps, and third plurality of data transmission rates includes rates from 100 Mbps to 1000 Mbps.

8. (Currently Amended) A data transmission rate control system, comprising:
means for storing a first plurality of data transmission rates, wherein each of the first plurality of data transmission rates are spaced from each other by a first incremental value;
means for storing a second plurality of data transmission rates, wherein the rates of the second plurality of data transmission rates are greater than the rates of the first plurality of data transmission rates and wherein each of the second plurality of data transmission rates are spaced from each other by a second incremental value that is greater than the first incremental value;
means for storing a third plurality of data transmission rates in a register, wherein the rates of the third plurality of data transmission rates are greater than the rates of the second plurality of data transmission rates and wherein each of the third plurality of data transmission rates are spaced from each other by a third incremental value greater than the second incremental value, wherein the second incremental value is at least three times larger than the first incremental value, and wherein the third incremental value is at least ten times larger than the first incremental value;

means for receiving a request to transmit data over a port of a switch at a requested transmission rate;

means for selecting one of the first plurality of data transmission rates or one of the

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second data transmission rates or one of the third data transmission rates at which to transmit data over the port, wherein the selected transmission rate is based on the requested transmission rate; and

means for transmitting data through the port using the selected data transmission rate.

9. (Currently Amended) A data transmission rate control system, comprising:
registers configured for storing a first plurality of data transmission rates, wherein each of the first plurality of data transmission rates are spaced from each other by a first incremental value;

registers configured for storing a second plurality of data transmission rates, wherein the rates of the second plurality of data transmission rates are greater than the rates of the first plurality of data transmission rates and wherein each of the second plurality of data transmission rates are spaced from each other by a second incremental value that is greater than the first incremental value;

registers configured for storing a third plurality of data transmission rates in a register, wherein the rates of the third plurality of data transmission rates are greater than the rates of the second plurality of data transmission rates and wherein each of the third plurality of data transmission rates are spaced from each other by a third incremental value greater than the second incremental value, wherein the second incremental value is at least three times larger than the first incremental value, and wherein the third incremental value is at least ten times larger than the first incremental value

a receiving engine configured for receiving a request to transmit data over a port of a switch at a requested transmission rate;

a rate setting engine configured to select one of the first plurality of data transmission rates or one of the second data transmission rates or one of the third data transmission rates at which to transmit data over the port, wherein the selected transmission rate is based on the requested transmission rate; and

a transmission engine, communicatively coupled to the rate setting engine, the transmission engine configured to transmit data through the port using the selected data transmission rate.

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10. (Cancelled)

11. (Cancelled)

12. (Cancelled)

13. (Cancelled)

14. (Currently Amended) The system of claim 9 [[12]], wherein the first incremental value is 64 Kbps, the second incremental value is 1 Mbps, and the third incremental value is 8 Mbps.

15. (Currently Amended) The system of claim 9 [[12]], wherein a first plurality of data transmission rates includes rates from 0 Kbps to 2 Mbps, a second plurality of data transmission rates includes rates from 2 Mbps to 100 Mbps, and third plurality of data transmission rates includes rates from 100 Mbps to 1000 Mbps.

16. (Currently Amended) A computer-readable medium having stored thereon instructions that, when executed [[to]] cause ~~a processor~~ one or more processors to execute a method, the method comprising:

store storing a second plurality of data transmission rates in a register, wherein the rates of the second plurality of data transmission rates are greater than the rates of the first plurality of data transmission rates and wherein each of the second plurality of data transmission rates are spaced from each other by a second incremental value that is greater than the first incremental value;

store a third plurality of data transmission rates in a register, wherein the rates of the third plurality of data transmission rates are greater than the rates of the second plurality of data transmission rates and wherein each of the third plurality of data transmission rates are spaced from each other by a third incremental value greater than the second incremental value,

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wherein the second incremental value is at least three times larger than the first incremental value, and wherein the third incremental value is at least ten times larger than the first incremental value;

~~receive~~ ~~receiving~~ a request to transmit data over a port of a switch at a requested transmission rate;

~~select~~ ~~selecting~~ one of the first plurality of data transmission rates or one of the second data transmission rates or one of the third data transmission rates at which to transmit data over the port, wherein the selected transmission rate is based on the requested transmission rate; and ~~transmit~~ ~~transmitting~~ data through the port using the selected data transmission rate.

17. (Cancelled)

18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

21. (Currently Amended) The computer-readable medium of claim 16 [[19]], wherein the first incremental value is 64 Kbps, the second incremental value is 1 Mbps, and the third incremental value is 8 Mbps.

22. (Currently Amended) The computer-readable medium of claim 16 [[19]], wherein a first plurality of data transmission rates includes rates from 0 Kbps to 2 Mbps, a second plurality of data transmission rates includes rates from 2 Mbps to 100 Mbps, and third plurality of data transmission rates includes rates from 100 Mbps to 1000 Mbps.